

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: PEAKED HILL POND	Lake Area (ha): 4.45
Town: THORNTON	Maximum depth (m): 4.8
County: Grafton	Mean depth (m): 1.6
River Basin: Merrimack	Volume (m ³): 70500
Latitude: 43°53'58" N	Relative depth: 2.0
Longitude: 71°43'12" W	Shore configuration: 1.74
Elevation (ft): 1155	Areal water load (m/yr): 11.64
Shore length (m): 1300	Flushing rate (yr ⁻¹): 7.40
Watershed area (ha): 82.4	P retention coeff.: 0.53
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

26 January 1993

11 August 1992

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 95%	PERIDINIUM 90%
	#2		
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			1110
CHLOROPHYLL-A (µg/L)			6.40
DOM. ZOOPLANKTON (% TOTAL)	#1	KELICOTTIA 39%	NAUPLIUS LARVA 52%
	#2	CALANOID COPEPODS 39%	KERATELLA 16%
	#3	KERATELLA 22%	CALANOID COPEPODS 14%
ROTIFERS/LITER		14	33
MICROCRUSTACEA/LITER		9	108
ZOOPLANKTON ABUNDANCE (#/L)		23	144
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			2.9
BOTTOM DISSOLVED OXYGEN (mg/L)		4.8	1.9
BACTERIA (E. coli, #/100 ml)	#1		< 1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None
Anoxic volume (m³): None

CHEMICAL:Lake: PEAKED HILL POND
Town: THORNTON

	26 January 1993		11 August 1992		
DEPTH (m)	1.5	3.0	1.0		3.5
pH (units)	5.9	5.9	6.4		6.1
A.N.C. (Alkalinity)	3.4	3.4	2.2		2.2
NITRATE NITROGEN	0.05	0.05	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.17	0.14			
TOTAL PHOSPHORUS	0.009	0.007	0.014		0.017
CONDUCTIVITY (μ mhos/cm)	25.1	25.3	19.1		19.2
APPARENT COLOR (cpu)	17	16	27		32
MAGNESIUM			0.38		
CALCIUM			1.6		
SODIUM			< 1.0		
POTASSIUM			< 0.40		
CHLORIDE	< 3	< 3	< 3		< 3
SULFATE	5	5	4		4
TN : TP	24	27			
CALCITE SATURATION INDEX			4.3		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1992

D.O. S.D. PLANT CHL TOTAL CLASS

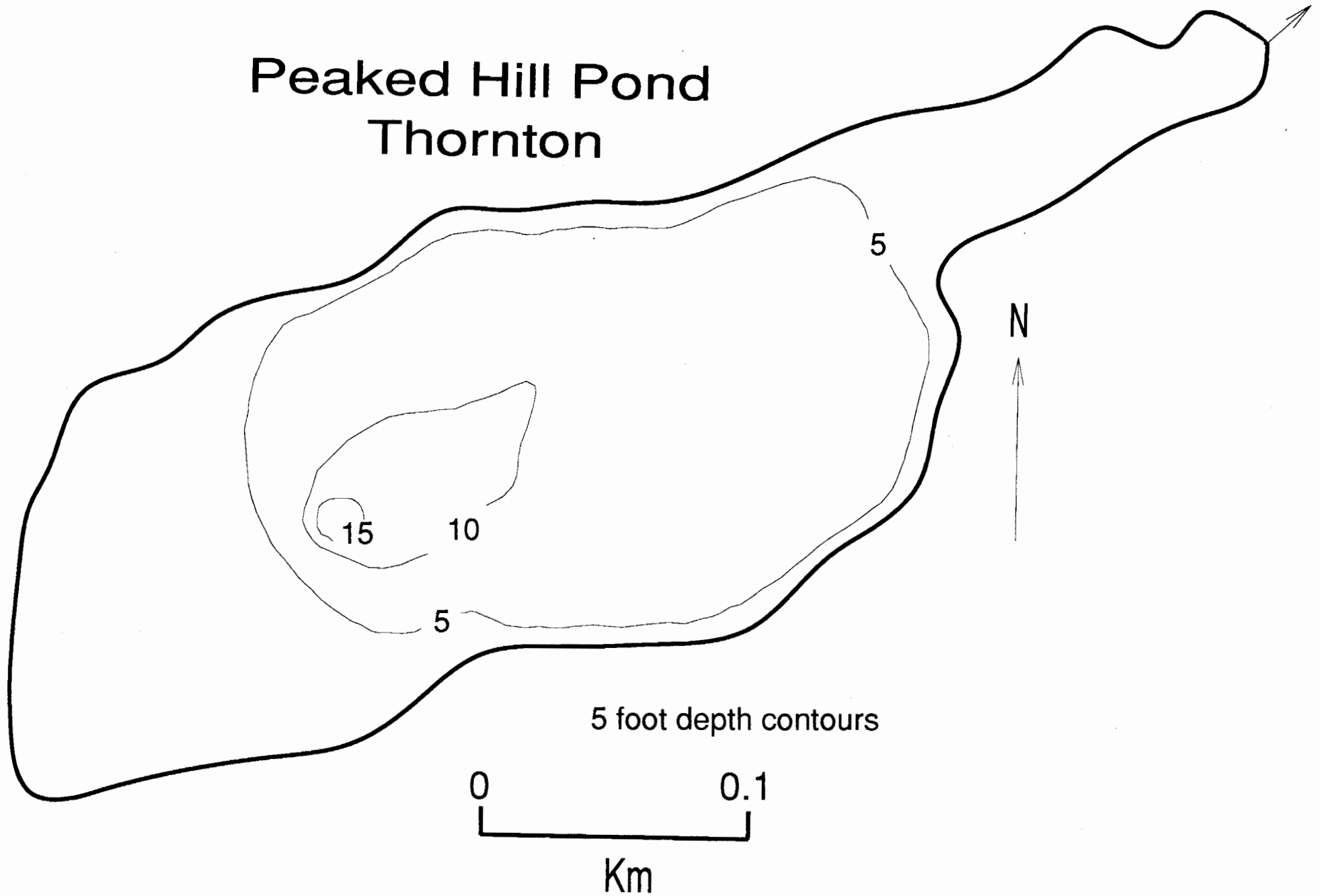
**	3	4	1	8	Meso.
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COMMENTS:

1. This is a remote pond, accessible by foot only. It was surveyed jointly with the Fish and Game Department. It is also sampled each spring by helicopter as part of the DES acid rain monitoring program and the F&G fish stocking program.
2. Merismopedia (80%) and blue-greens (85%) were the dominant wholewater phytoplankton genus and class respectively.

Peaked Hill Pond Thornton

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